

**AMENDMENTS TO THE CLAIMS**

1. (Currently Amended) An implant adapted to be placed between vertebrae comprising:

a spacer having a first end adapted for contacting a ~~spinous process of a first vertebra wherein the first end is cylindrically shaped about an axis, wherein the axis is perpendicular to a lateral plane of the vertebrae, wherein the first end is not attached to the spinous process of the first vertebra~~ and a beam extending from the spacer first end; and

a base adapted to be mounted to a second vertebra with the beam mounted to the base, ~~wherein the beam extends beyond the mounted base, where the base is adapted to be hung on the second vertebra, where the base is secured by an action of the first end contacting the first vertebra~~

the first end of the spacer that contacts the first vertebra includes a greater thickness than the beam.

2. (Original) The implant of claim 1 wherein the beam has an elongated aperture therein and the elongated aperture receives a post extending from the base.

3. (Original) The implant of claim 2 wherein a lock cooperates with the post of the base to secure the beam to the base.

4. (Original) The implant of claim 1 wherein the beam can be mounted to the base in a plurality of positions.

5. (Previously Presented) The implant of claim 1 wherein the first end of the spacer has a cross-section that is one of circular, elliptical, oval and ovoid.

6. (Previously Presented) The implant of claim 1 wherein the implant is adapted to be positioned between a S1 and a L5 vertebrae.

7. (Currently Amended) An implant adapted to be placed between vertebrae comprising:

a brace ~~spacer~~ with a first end, ~~wherein the first end has a curved surface formed about an axis, wherein the curved surface is adapted to contact a spinous process of a first vertebrae,~~ and a second end, ~~wherein the second end is planar, wherein the axis is parallel to the plane of the second end, wherein the spacer is not attached to the spinous process of the first vertebrae;~~ and

a base having at least a flange adapted to engage a second vertebrae and the brace ~~spacer~~ engaging the base, ~~wherein the spacer extends beyond the base;~~

the brace including a first surface that faces towards the base and a second surface that faces away from the base, a thickness of the brace measured between the first and second surfaces being greater at the first end than the second end.

8. (Previously Presented) The implant of claim 7 wherein the implant is adapted to be positioned between the S1 and L5 vertebrae.

9. (Currently Amended) An implant adapted to be placed between L5 and S1 vertebrae comprising:

a body;

at least one hook extending from the body and adapted to allow the body to engage a S1 vertebra;

a brace beam extending from the body and including an elongated shape with a major axis and a minor axis, wherein the brace beam has a distal end on the major axis adapted for

contacting a spinous process of a L5 vertebra, ~~wherein the distal end has a curved surface formed about an axis, wherein the axis is parallel to the plane of the beam, wherein the implant is not attached to the spinous process of the L5 vertebrae; and~~

a device that can secure the brace beam to the body, ~~wherein the beam extends beyond the body, wherein the device relies upon pressure exerted by the L5 vertebra on the distal end of the beam to secure the device to the body.~~

10. (Original) The implant of claim 9 wherein:

at least part of the implant is comprised of a material selected from the group consisting of: polyetheretherketone, polyaryletheretherketone, and polyetherketoneketone.

11. (Original) The implant of claim 9 wherein:

at least part of the implant is comprised of a material selected from the group consisting of: polyetherketoneetherketoneketone, polyetheretherketoneketone, polyketone, and polyetherketone.

12. (Original) The implant of claim 9 wherein:

at least part of the implant is comprised of titanium.

13. (Currently Amended) The implant of claim 9 wherein the device can secure the brace beam to the body in a plurality of positions.

14. (Currently Amended) The implant of claim 9 wherein the distal end of the beam is bulbous.

15. (Currently Amended) The implant of claim 9 wherein the distal end of ~~the beam~~ is one of elliptical, ovoid, oval, and round.

16. (Currently Amended) The implant of claim 9 wherein the distal end of ~~the beam~~ provides a surface which is at an angle to ~~a the beam~~ of the brace, which surface is adapted to engage the L5 vertebra.

17. (Currently Amended) The implant of claim 9 wherein the distal end of ~~the beam~~ provides a surface that is adapted to spread a contact load between the L5 vertebra and the distal end.

18. (Currently Amended) The implant of claim 9 wherein the distal end of ~~the beam~~ is adapted to engage a spinous process of the L5 vertebra.

19. (Canceled)

20. (Currently Amended) The implant of claim 9 wherein the distal end of ~~the beam~~ includes a convex surface that is adapted to engage a spinous process of the L5 vertebra to spread the load between the distal end of ~~the beam~~ and the spinous process.

21. (Currently Amended) The implant of claim 9 wherein the brace beam includes an elongated aperture and the device extends through the aperture and can be secured to the aperture in a plurality of positions in order to position the brace beam relative to the body in a plurality of positions.

22. (Currently Amended) The implant of claim 9 wherein the body includes a first portion and a second portion with a beam platform located between the first and second portions and the beam platform spaced from the first and second portions in order to space the brace beam from the first and second portions.

23. (Original) The implant of claim 22 wherein the hook extends from the first portion and another hook extends from the second portion.

24. (Original) The implant of claim 22 wherein the device extends from the platform.

25. (Canceled)

26. (Currently Amended) An implant adapted to be placed between vertebrae comprising:

a body;

at least one hook extending from the body to allow the body to engage a first vertebra;

a brace beam extending from the body and including a distal end, ~~the beam having a distal end with a curved surface formed about an axis, wherein the axis is parallel to the plane of the beam, wherein the curved surface is adapted to contact a spinous process of a second vertebra~~ and an elongated section extending outward from the distal end that is secured to the body, the distal end including a greater thickness than the elongated section, ~~wherein the beam is not attached to the spinous process of the second vertebra;~~ and

a device that secures the elongated section ~~beam~~ to the body.

27. (Original) The implant of claim 26 wherein:

At least part of the implant is comprised of a material selected from the group consisting of: polyetheretherketone, polyaryletheretherketone, and polyetherketoneketone.

28. (Original) The implant of claim 26 wherein:

At least part of the implant is comprised of a material selected from the group consisting of polyetherketoneetherketoneketone, ployetheretherketoneketone, polyketone, and polyetherketone.

29. (Original) The implant of claim 26 wherein: at least part of the implant is comprised of titanium.

30. (Currently Amended) The implant of claim 26 wherein the device secures the brace beam to the body in a plurality of positions.

31. (Currently Amended) The implant of claim 26 wherein the distal end ~~of the beam~~ is bulbous.

32. (Currently Amended) The implant of claim 26 wherein where the distal end ~~of the beam~~ is one of elliptical, ovoid, oval, and round.

33. (Currently Amended) The implant of claim 26 wherein the distal end ~~of the beam~~ provides a surface which is at an angle to the elongated section beam, which surface is adapted to engage a L5 vertebra.

34. (Currently Amended) The implant of claim 26 wherein the distal end ~~of the beam~~ provides a surface that is adapted to spread a contact load between a L5 vertebra and the distal end.

35. (Currently Amended) The implant of claim 26 wherein the distal end of ~~the beam~~ is adapted to engage a spinous process of a L5 vertebra.

36. (Currently Amended) The implant of claim 26 wherein the distal end of ~~the beam~~ is adapted to engage a spinous process of a L5 vertebra over a conforming contact area.

37. (Currently Amended) The implant of claim 26 wherein the distal end of ~~the beam~~ includes a convex surface that is adapted to engage a spinous process of a L5 vertebra in order to spread the load between the distal end of ~~the beam~~ and the spinous process of the L5 vertebra.

38. (Currently Amended) The implant of claim 26 wherein the brace beam includes an elongated aperture and the device extends through the aperture and can be secured to the aperture in a plurality of positions in order to position the brace beam relative to the body in a plurality of positions.

39. (Currently Amended) The implant of claim 26 wherein the body includes a first portion and second portion with a beam platform located between the first and second positions and the beam platform spaced from the first and second positions in order to space the brace beam from the first and second portions.

40. (Original) The implant of claim 39 wherein the hook extends from the first portion and another hook extends from the second portion.

41. (Original) The implant of claim 39 wherein the device extends from the platform.

42. (Original) The implant of claim 26 including a device that secures the base to an S1 vertebra.

43. (Currently Amended) An implant adapted to be placed between vertebrae comprising:

a body having first and second portions with a platform located between the first and second portions, the body including a superior-most edge; wherein the platform is positioned and extends such that there is space between the platform and the first and second portions;

first and second hooks extending from the first and second portions respectively ~~in a first direction, wherein the first and second hooks are in two sagittal planes equidistant from a mid-sagittal plane wherein the first direction extends from L5 to S1 vertebrae along the mid-sagittal plane, wherein the hooks are adapted to engage a first vertebra, wherein no additional hooks extend in a direction opposite to the first direction;~~

a brace beam with a planar proximal end and a distal end having a curved surface formed about an axis, ~~wherein the axis is parallel to the plane of the beam, wherein the curved surface is adapted to contact a spinous process of a second vertebra, which surface is at an angle to the beam, wherein the beam is not attached to the spinous process of the second vertebra;~~ and

a device that can selectively position the brace beam relative to the body in a plurality of positions to locate the curved surface of the distal end outward beyond the superior-most edge of the body to contact a second vertebra.

44. (Original) The implant of claim 43 wherein:

At least part of the implant is comprised of a material selected from the group consisting of: polyetheretherketone, polyaryletheretherketone, and polyetherketoneketone.



45. (Original) The implant of claim 43 wherein:

At least part of the implant is comprised of a material selected from the group consisting of: polyetherketoneetherketoneketone, ployetheretherketoneketone, polyketone, and polyetherketone.

46. (Original) The implant of claim 43 wherein: at least part of the implant is comprised of titanium.

47. (Currently Amended) The implant of claim 43 wherein the device secures the brace beam to the body in a plurality of positions.

48. (Currently Amended) The implant of claim 43 wherein the distal end ~~of the beam~~ is bulbous.

49. (Currently Amended) The implant of claim 43 wherein where the distal end ~~of the beam~~ is one of elliptical, ovoid, oval, and round.

50. (Currently Amended) The implant of claim 43 wherein the distal end provides a surface which is at an angle to the proximal end beam, which surface is adapted to engage a L5 vertebra.

51. (Original) The implant of claim 43 wherein the distal end provides a surface that is adapted to spread a contact load between a L5 vertebra and the distal end.

52. (Currently Amended) The implant of claim 43 wherein the distal end ~~of the beam~~ is adapted to engage a spinous process of a L5 vertebra.

53. (Currently Amended) The implant of claim 43 wherein the distal end ~~of the beam~~ is adapted to engage a spinous process of a L5 vertebra over a conforming contact area.

54. (Currently Amended) The implant of claim 43 wherein the distal end ~~of the beam~~ includes a convex surface that is adapted to engage a spinous process of a L5 vertebra in order to spread the load between the distal end ~~of the beam~~ and the spinous process of the L5 vertebra.

55. (Currently Amended) The implant of claim 43 wherein the proximal end ~~beam~~ includes an elongated aperture and the device extends through the aperture and can be secured to the aperture in a plurality of positions in order to position the brace ~~beam~~ relative to the body in a plurality of positions.

56. (Original) The implant of claim 43 wherein the device extends from the platform.

57. (Original) The implant of claim 43 including a device that secures the base to an S1 vertebra.

58. (Currently Amended) An implant adapted to be placed between vertebrae comprising;  
a body having first and second portions with a platform located between the first and second portions; ~~wherein the platform is positioned and extends such that there is a space between the platform and the first and second portions;~~

a hook extending from an anterior side of the body and being ~~base in a direction~~  
~~opposite to the direction that the platform extends from the first and second portion; the hook~~  
adapted to engage a first vertebra;

a brace connected to a posterior side of the body and including an elongated shape with  
a major axis, the brace including a first end on the major axis ~~beam with a planar proximal end~~  
~~and a distal end having a concave surface that is formed about an axis, wherein the axis is~~  
~~parallel to the plane of the beam, wherein the curved surface is adapted to contact a spinous~~  
~~process of a second vertebra, which concave surface is at an angle to the beam, wherein the~~  
~~beam is not attached to the spinous process of the second vertebra, wherein the contact of the~~  
~~beam on the spinous process of the second vertebra and the hook is adapted to secure the~~  
~~base to the first vertebra; and~~

a device that can selectively position the brace ~~beam~~ relative to the body, wherein the  
first end ~~beam~~ extends beyond the body such that a mid-point of the first end contacts against  
the spinous process of the second vertebra.

59. (Original) The implant of claim 58 wherein:

at least part of the implant is comprised of a material selected from the group consisting  
of: polyetheretherketone, polyaryletheretherketone, and polyetherketoneketone.

60. (Original) The implant of claim 58 wherein:

at least part of the implant is comprised of a material selected from the group consisting  
of: polyetherketoneetherketoneketone, ployetheretherketoneketone, polyketone, and  
polyetherketone.

61. (Original) The implant of claim 58 wherein: at least part of the implant is comprised of titanium.

62. (Currently Amended) The implant of claim 58 wherein the device secures the brace beam to the body in a plurality of positions.

63. (Currently Amended) The implant of claim 58 wherein the first ~~distal end of the beam~~ is bulbous.

64. (Currently Amended) The implant of claim 58 wherein where the first ~~distal end of the beam~~ is one of elliptical, ovoid, oval, and round.

65. (Canceled)

66. (Currently Amended) The implant of claim 58 wherein the first ~~distal end of the beam~~ provides a surface that is adapted to spread a contact load between a L5 vertebra and the distal end.

67. (Currently Amended) The implant of claim 58 wherein the first ~~distal end of the beam~~ is adapted to engage a spinous process of a L5 vertebra.

68. (Currently Amended) The implant of claim 58 wherein the first ~~distal end of the beam~~ is adapted to engage a spinous process of a L5 vertebra over a conforming contact area.

69. (Currently Amended) The implant of claim 58 wherein the first ~~distal end of the beam~~ includes a convex surface that is adapted to engage a spinous process of a L5 vertebra in order to spread the load between the first ~~distal end of the beam~~ and the spinous process of a L5 vertebra.

70. (Withdrawn) A method for inserting an implant between an L5 and S1 vertebrae comprising the steps of:

- attaching a base of an implant on to the median sacral lamina of the S1 vertebra; and
- adjusting the position of a beam with a distal end relative to the base so that the distal end can contact a spinous process of an L5 vertebra and so that there is a desire spacing between the L5 and S1 vertebrae.

71. (Withdrawn) The method of claim 70 including the step of removing a bony protuberance from the S1 vertebrae prior to attaching the base to the S1 vertebra.

72. (Withdrawn) The method of claim 70 wherein the attaching step includes hooking the base over the S1 vertebra.

73. (Withdrawn) The method of claim 70 without altering the L5 or the S1 vertebrae.

74. (Withdrawn) A method for inserting an implant between the vertebrae comprising the steps of:

- attaching a base of an implant on to the lamina of the a first vertebra; and

adjusting the position of a beam with a distal end relative to the base so that the distal end can contact a spinous process of a second vertebra and so that there is a desired spacing between the vertebrae.

75. (Withdrawn) The method of claim 74 including the step of removing a bony protuberance from the first vertebra prior to attaching the base to the first vertebra.

76. (Withdrawn) The method of claim 74 without altering the first or second vertebrae.

77. (Currently Amended) An implant adapted to be placed between vertebrae comprising:

a body;  
at least one hook extending from the body and adapted to allow the body to engage a first vertebra;

a brace spacer extending from the body; the brace spacer having a distal end with a curved surface with a first thickness and a beam with a second smaller thickness, formed about an axis and a proximal end that is planar, wherein the axis is parallel to the plane of the proximal end, wherein the curved surface is adapted to contact a spinous process of a second vertebra, ~~wherein the spacer is not attached to the spinous process of the second vertebra;~~ and

a device that connects the beam to the body to that can secure the brace spacer to the body.

78. (Withdrawn) A method of implanting a device between S1 and L5 vertebrae in a spine, the method comprising:

a. exposing an affected region of the spine posteriorly;

- b. inserting a base of the device between the S1 and L5 vertebrae so that a pair of flanges on the device engage an S1 vertebrae;
- c. selecting a spacer;
- d. installing the spacer on the base;
- e. adjusting a position of the spacer between the vertebrae;
- f. securing the spacer to the base; and
- g. closing the wound.

79. (Withdrawn) A method of adjusting an implant, the method comprising:

- a. accessing the implant with a cannula;
- b. loosening a nut on a shaft that holds a spacer onto a base of the implant; and
- c. sliding the spacer in one of an upper and lower direction to adjust a position of a bulbous end of the spacer between an S1 and L5 vertebrae.

80. (Withdrawn) A kit for implanting an interspinous implant comprising:

- a plurality of spacers having a bulbous end and a shaft extending therefrom;
- a base that is adapted to engage an S1 vertebrae; and
- a lock that secures one of the plurality of spacers onto a post extending from the base.

81. (Withdrawn) A kit for implanting an interspinous implant comprising:

- a plurality of spacers;
- a shaft to engage a spacer selected from the plurality of spacers;
- a base that engages a medial sacral lamina; and
- a lock that secures the shaft onto a post extending from the base.